

CLAIMS

1. A method of dynamically controlling usage of a resource by task entities respectively
5 involved in processing different input modalities, wherein the relative average actual or allocated usage of the resource by the task entities is dynamically adjusted according to one or more of the following:
 - actual usage of the different modalities by a user;
 - confidence in the results of processing of each of the modalities;
 - 10 - pragmatic information on mode usage.
2. A method according to claim 1, wherein the resource is communication bandwidth.
3. A method according to claim 1, wherein the resource is processing power.
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4. A method according to claim 1, wherein the resource is memory.
5. A method according to claim 1 applied to each of two separate resources each used by different respective entities of said different input modalities, the adjustment of the relative
20 usage by the different modalities of the two resources being independent of each other.
6. A method according to claim 1 applied to each of two separate resources each used by different respective entities of said different input modalities, the adjustment of the relative usage by the different modalities of the two resources being jointly controlled.
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7. A method according to claim 1, wherein said resource is used by multiple task entities for each modality, the relative usage of the resource being first adjusted between modalities and then between task entities in the same modality.
- 30 8. A method according to claim 1, wherein said resource is used by multiple task entities for each modality, the relative usage of the resource being first adjusted between different groups of equivalent task entities of different modalities and then between task entities of

the same group.

9. A method according to claim 1, wherein adjustment of the relative usage of the resource allocation is effected by one of:

- 5 - controlling operation of the task entities to adjust their output to the resource;
- controlling the flow of output from the task entities to the resource;
- controlling the allocation of the resource between the task entities.

10. An arrangement comprising task entities respectively involved in processing different
10 input modalities, a limited resource arranged to be used by the task entities, and a moderator for dynamically adjusting the relative average actual or allocated usage of the resource by the task entities in dependence on one or more of the following:

- actual usage of the different modalities by a user;
- confidence in the results of processing of each of the modalities;
- 15 - pragmatic information on mode usage.

11. An arrangement according to claim 10, further comprising a respective additional task entity associated with each said input modality, and a communications system arranged to intercommunicate the task entities associated with the same input modality; said limited
20 resource being communication bandwidth provided by said communications system.

12. An arrangement according to claim 10, wherein the task entities comprise a shared processing system and said limited resource is the processing power provided by this processing system.

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13. An arrangement according to claim 10, wherein the task entities comprise a shared memory unit and said limited resource is the memory provided by the memory unit.

14. An arrangement according to claim 10, further comprising further task entities
30 involved in processing respective ones of said input modalities, a further limited resource arranged to be used by said further task entities, and a further moderator for dynamically adjusting the relative average actual or allocated usage of the resource by the further task

entities; the operation of the two moderators being independent of each other.

15 15. An arrangement according to claim 10, further comprising further task entities involved in processing respective ones of said input modalities, a further limited resource
5 arranged to be used by said further task entities, and a further moderator for dynamically adjusting the relative average actual or allocated usage of the resource by the further task entities; the moderators being arranged to operate in a coordinated manner.

10 16. An arrangement according to claim 10, further comprising further task entities involved in processing respective ones of said input modalities, the further task entities also being arranged to use said resource and the moderator being arranged first to adjust relative usage of said resource between modalities and then between task entities in the same modality.

15 17. An arrangement according to claim 10, further comprising further task entities involved in processing respective ones of said input modalities, the further task entities also being arranged to use said resource and the moderator being arranged first to adjust relative usage of said resource between different groups of equivalent task entities of different modalities and then between task entities of the same group.

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18. An arrangement according to claim 10, wherein the moderator is arranged to effect adjustment of the relative usage of the resource by one of:

- controlling operation of the task entities to adjust their output to the resource;
- controlling the flow of output from the task entities to the resource;
- 25 - controlling the allocation of the resource between the task entities.